Nuclear Division News

UNION CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 8, No. 2/January 20, 1977

Fermi, Lawrence awards to Division scientists

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Lott honored for fuel cycle, transuranic element work

Adolphus L. "Pete" Lotts, a research staff member at Oak Ridge Natioanal Laboratory, is one of five scientists selected to receive the 1976 Ernest Orlando Lawrence Award for outstanding contributions in the field of atomic energy.

The awards, which are sponsored by the Energy Research and Development Administration, were presented at a special awards ceremony in Washington, D.C., on January 14.

Lotts was cited for "his leadership and innovative contributions to the development of the thorium /uranium-233 fuel cycle as applied to high temperature gas-cooled reactors and similar work aiding transuranic element production in the High Flux Isotope Reactor" (a research reactor located at ORNL).

Served in Army lab

Lotts received his bachelor's and master's degrees in metallurgical engineering from Virginia Polytechnic Institute and State University. Following two years of military service at the Engineer Research and Development Laboratory, Fort Belvoir, Va., Lotts joined the Atomic Energy Division of Babcock and Wilcox Company as an associate materials specialist.

In 1959, Lotts joined the staff of the Metals and Ceramics Division at ORNL. He currently is manager of the Division's Gas-Cooled Reactor Programs, in addition to serving as associate director of the Laboratory's Gas-Cooled Reactor Programs and manager of its Thorium Utilization Program.

During the past decade, Lotts has played a central role in developing numerous aspects of the nuclear power plant fuel cycle. Although he has specialized in developing techniques for fabricating and recycling highly radioactive materials, Lotts has also contributed to such nuclear related operations as fuel component design, reactor operations, chemical reprocessing, transportation and waste disposal.

Thorium as a fuel

Particular emphasis in his work since 1969 has been on developing the fuel cycle and fuel components for the High-Temperature Gas-Cooled Reactor, an advanced nuclear reactor concept which would use thorium, in addition to uranium, as fuel.

A. L. "Pete" Lotts

Lotts has made major contributions to the design of equipment and processes required to produce man-made transuranic—heavier than uranium—isotopes, which have a variety of research applications. His work also encompasses the

(Please turn to page 8)

In this issue . . .

Your Social Security base is increased again. Effective January 1, you will pay 4.95 percent on the first $16,500 you earn for a total of $965.25. A history of Social Security rates appears on page 5.

Other features:

Russell cited for research in genetics, radiation effects

William A. Russell, international authority on the genetic effects of radiation in mammals, has received the Energy Research and Development Administration's Enrico Fermi Award for 1976.

The Fermi Award is the highest scientific award given by ERDA. It is awarded to recognize exceptional and outstanding scientific and technical achievement in the development, use or control of atomic energy.

The Fermi Award consists of a citation, gold medal and $25,000. It is made with the approval of the President of the United States.

The citation of Russell reads:

"For his outstanding contributions during a long and distinguished career to the quantitative evaluation of the genetic effects of radiation in mammals which serve as a major scientific base for national and international standards for radiation protection of populations; for his major contributions to the principles of genetic theory; and, most recently, for his vigorous efforts to evaluate in animals the mutagenic potential of chemical pollutants arising from non-nuclear energy sources."

The Fermi Award was presented to Russell by Robert C. Seamans Jr., ERDA Administrator, during a ceremony held January 14 in Washington, D. C.

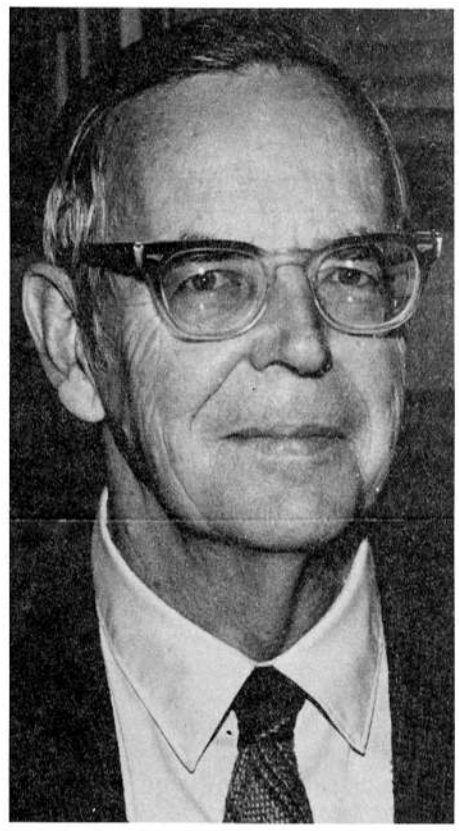
The Award dates back to 1954 when the Atomic Energy Commission, predecessor agency of ERDA, presented a special award to Enrico Fermi, leader of the group of scientists who achieved the first self-sustained, controlled nuclear chain reaction.

In 1956, an award, named in honor of Fermi, was established on a permanent basis. It was last awarded in 1972.

Other recipients

Past recipients include John von Neumann, Ernest O. Lawrence, Eugene P. Wigner, Glenn T. Seaborg, Hans A. Bethe, Edward Teller, J. Robert Oppenheimer, Hyman G. Rickover, Otto Hahn, Lise Meitner and Fritz Strassman, John A. Wheeler, Walter H. Zinn, Norris E. Bradbury, Shields and Stafford L. Warren, and Mason Benedict.

Russell, principal geneticist in the Biology Division of Oak Ridge National Laboratory, was recently named a Senior Research Fellow of Union Carbide Corporation.



William A. Russell

A native of England, and an Oxford graduate, Russell received his Ph.D. from the University of Chicago in 1936, and shortly thereafter became a United States citizen.

He organized and, for more than 28 years, has been in charge of the world's largest study of the genetic effects of radiation in mammals.

Few facts available

At the time the study began, little was known about the genetic effects of radiation in mammals, and it was doubtful that results from lower organisms could be applied to man. The innovative work of Russell and his co-workers soon provided data that, over the years, have formed the basis for estimating genetic hazards of radiation to man. Corresponding recommendations made by national and international committees, such as the National Academy of Sciences Advisory Committee on the Biological Effects of Ionizing Radiation and the United Nations' Scientific Committee on the Effects of Atomic Radiation, are based on the results of studies by Russell and his group.

Prior to the time that Russell began his work with mammals, Drosophila

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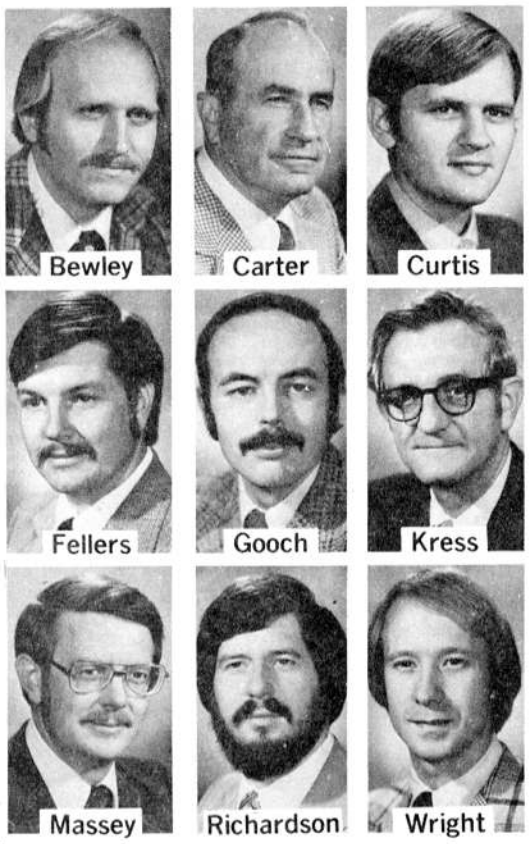
Nine certified Professional Engineers



Nine engineers at the Paducah Gaseous Diffusion Plant have recently completed the prescribed requirements by the state board and have received licenses as Professional Engineers. They are H. Dale Bewley, Jerry W. Carter, Mark T. Curtis, Henry L. Fellers Jr., James R. Gooch, Byron A. Kress, David M. Massey, Earl Richardson and Paul D. Wright.

Registration laws in the various states are fairly uniform. Requirements include graduation from an approved engineering college, at least four years experience in engineering work, plus an eight-hour written and/or oral examination in the fundamentals of engineering.

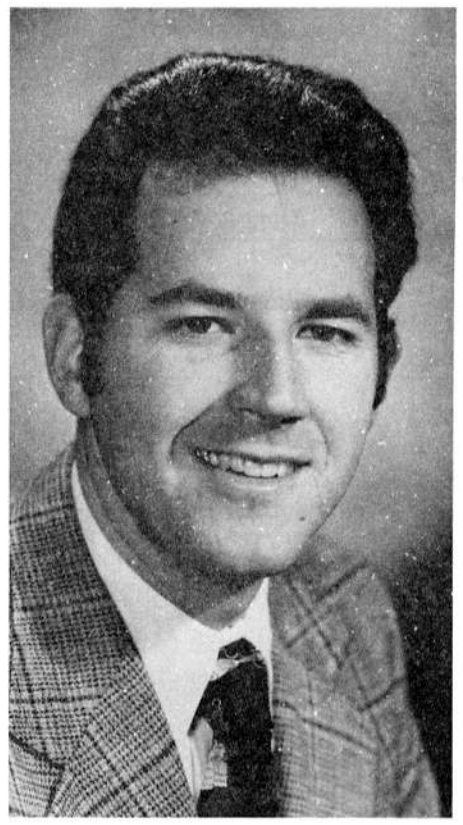
Kosinski appointed superintendent of Paducah's Technical Laboratory

F. E. "Gus" Kosinski has been named superintendent of the Technical Laboratory at the Paducah Gaseous Diffusion Plant, where he will be responsible for mechanical, metallurgical and chemical technology.

Kosinski, a native of New Jersey, was most recently in process development in ORGDP's Gaseous Diffusion Development Division, during which time he also served as a technical recruiter. He worked briefly in the Chemicals and Plastics Division of Union Carbide after joining the company in 1968.

He has a B.S. degree in chemical engineering from Rutgers University and an M.S. from the University of Mississippi. He is a member of the American Institute of Chemical Engineers.

Mrs. Kosinski is the former Mary Lou Radzawich, and the couple has two sons, Edward and Philip. They will make their home in Paducah at Route 11, Rhea Lee Drive.



F. E. Kosinski

Excludable sick pay no longer allowed as income deduction

Employees who received wage or salary payments during 1976 while away from work due to an illness or disability should note that the 1976 Tax Reform Act has revoked the federal income tax treatment for such wages or salaries. The revocation is effective with the 1976 taxable year.

Formerly, portions of such wages or salaries could be treated as excludable sick pay income for federal income tax purposes. Now, all such wages or salaries must be treated as regular income.

Since this change is retroactive to January 1, 1976, the Company will not prepare excludable sick pay statements for employees this year.

All sick pay or disability pay which is paid to active hourly or salaried employees, however, will continue to be exempt for Federal Social Security tax.

Employees who are affected by this provision of the 1976 Tax Reform Act should take this change into consideration when calculating and filing their 1976 federal income tax return.

Hourly employees who have received Sickness and Accident pay during disability absences in 1976 may contact their respective Employee Benefit Plans office to obtain the total amount of their income paid to them by this provision of their Group Life Insurance plan. Since the Company pays the full premium for this provision, the total amount received should be included in the employee's gross income. It has not been included in the total wages on the Form W-2, nor has it been subjected to Federal Income Tax withholding.

safety scoreboard

Time worked without a lost-time accident through January 13:

Paducah	107 Days	1,278,000 Man-Hours
ORGDP	10 Days	342,800 Man-Hours
Y-12 Plant	36 Days	938,000 Man-Hours
ORNL	119 Days	2,371,329 Man-Hours

New affirmative action categories

Recent Federal legislation has created new Affirmative Action Programs (AAP) for the handicapped, veterans of the Vietnam era and disabled veterans, reports Joanne Gailar, Nuclear Division equal opportunity coordinator.

Under the new regulations, employees who are handicapped, Vietnam era veterans, or disabled veterans are invited to identify themselves, if they wish to do so, to the Employee Relations Division at their location. As stated in the law, submission of this information is **voluntary.**

The submission of this information is voluntary. It will be kept confidential except that (1) supervisors and managers may be informed regarding restrictions on the work of, or accommodations for, employees who are handicapped or are disabled veterans; (2) first aid and safety personnel may be informed if the condition might require emergency treatment; and (3) government officials investigating compliance with the Act shall be informed.

"What we want to do is identify those individuals qualified for openings who are covered by these programs," says Gailar, "to ensure they receive equal opportunity for advancement and promotion."

If you feel you fall into one of the three new AAP categories, contact your Employee Relations Division.

Five promotions at ORGDP

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Barding

PH77-114

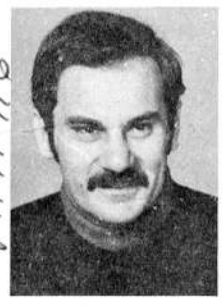
Clemmons

Hannah

PH77-113

Merckson

PH77-116



Nieto

Five have been promoted to maintenance supervisors at ORGDP. They are Leonard K. Barding, Melvin L. Clemmons, Jack L. Hannah, Fred M. Merckson and Alfredo S. Nieto.

Barding, a native of Titusville, Fla., joined Union Carbide in 1974, after working with the Bendix Corporation. He is presently attending Roane State Community College.

Barding and his wife, Martha, live at Route 4, Kingston. They have three children, Leonard, Tim and Tammy.

Clemmons, a native of Asheville, N.C., was employed at American Enka before joining Union Carbide in 1975. He attended Western Carolina University.

He and his wife, Carolyn, live at Route 7, Harriman. They have a son, Mel.

Hannah, who was born in Maryville, worked with the Adcock-Kirby Chevrolet Company before joining Union Carbide in 1974.

He and his wife, Phyllis, live at Route 1, Greenback. They have a daughter, Cynthia.

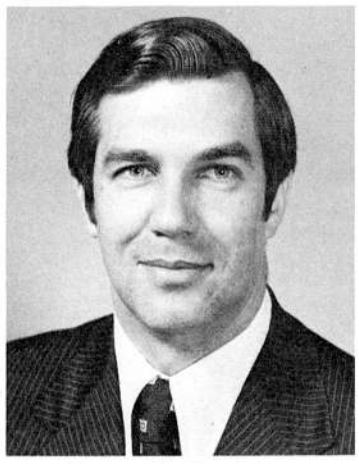
Merckson was born in Titusville, Fla., and joined Union Carbide early last year. He worked for McDonall Douglas prior to that time.

He and his wife, Ann, live at Route 1, Shawterry Road, Lenoir City. They have three children, Tena, Maury and Sheryl.

Nieto, a native of Madrid, Spain, joined Union Carbide in 1975. He attended Brevard Junior College, Cocoa, Fla.

Mrs. Neito is the former Josephine Friedman, and they live at 1236 Lovell View Drive, Knoxville. They have three children, Mitchell, Andy and Becky.

PH-75-568



Michael R. Bradshaw

17 1311

Frank F. Carringer

Carringer, Bradshaw appointed to budget-accounting posts

Frank F. Carringer has been named to succeed Gary A. Riser in Budget and Accounting at ORNL. Riser was recently appointed Manager of General Accounting. Michael R. Bradshaw will succeed Carringer at Y-12's Budget and Accounting.

Carringer, a Knoxville native, holds a B.S. degree in business administration from the University of Tennessee. He served in the U.S. Army before joining Union Carbide 18 years ago.

He and his wife, the former Johnnie Gilmer, live at 4524 Simona Drive, Knoxville. They have two children, Terri and Scott.

Bradshaw, former head of the materials management department at ORGDP, has been with Union Carbide 12 years. He formerly worked at Y-12 in the Materials and Services Division, and also worked at ORNL in the Personnel Services Division.

He holds a B.S. degree in business administration from Carson-Newman College and is in the Tennessee Air National Guard, and a life member of Alpha Kappa Psi, professional business fraternity. He is active in youth recreational activities in the Karns Community.

Mrs. Bradshaw is the former Sandra Thompson, and the couple lives at 9009 Shallowford Road. They have two sons.

New handbook edition available from NTIS

The 1977 edition of **Nuclear Air Cleaning Handbook** is now available from the National Technical Information Service (NTIS) at ORNL. Compiled by two ORNL engineers, Clifford A. Burchsted and Judd E. Kahn, and Asa B. Fuller, formerly at ORNL, the handbook is an update of a previous edition by Burchsted and Fuller.

The handbook has been prepared under the direction of ERDA's Division of Nuclear Fuel Cycle and Production. An intensive ERDA program aimed at effecting the control of gaseous effluents from nuclear facilities has produced numerous technical reports; the handbook provides generalized and coordinated guidance of these reports for designers and engineers. It draws together a wealth of background data, digests and evaluates it, and presents its essence in a condensed form that can be used effectively by technologists.

Red Cross sets blood drive February 2, 3

The Red Cross Bloodmobile will make its first appearance for 1977 in Oak Ridge on February 2 and 3. The locale will again be the Civic Center on the Oak Ridge Turnpike.

Hours on Wednesday, February 2, are from 3 to 9 p.m. and on Thursday, February 3, from noon until 6 p.m.

Look at the statistics: approximately 45 percent of our population cannot give blood (because they are either past 65, or under 18). That leaves 55 percent of the people. Subtract from that the ill, the incapacitated, the folks away from home, and many others . . . and it boils down to you and me.

Authorities find that only one percent of the population furnished whole blood for the other 99 percent.

And what's the pay? Nothing. Unless you count the inner warmth you get from giving a hand to somebody you will never see.

Clarke receives ERDA award

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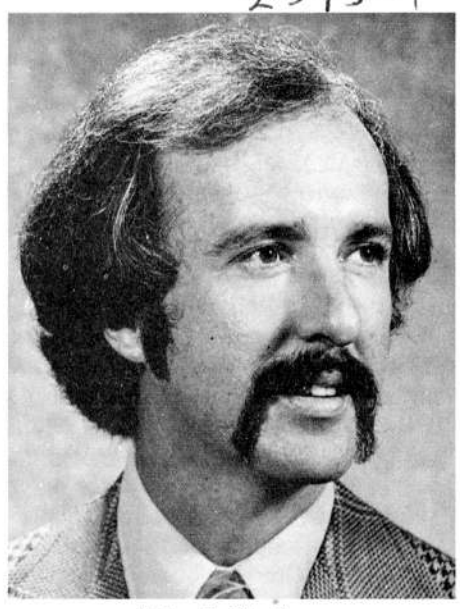

John F. Clarke

John F. Clarke, director of ORNL's Fusion Energy Division, is one of eight ERDA contractor employees to receive a special Distinguished Associate Award for 1976. This award recognizes outstanding efforts or achievements by individuals working with ERDA's major programs and projects.

Clarke, who received a bronze medal and a citation, was cited "for his leadership of a fusion program of unparalleled scope and depth covering theoretical and experimental work in both tokamak and mirror concepts, technology development in the fields of neutral beams and superconducting magnets, and major conceptual design work for next-generation tokamaks."

The citation also noted Clarke's ability to coordinate the various aspects of this program, which resulted last year in "the achievement of record high ion temperatures with the injection of ORNL-developed neutral beams of hydrogen atoms into the ORMAK tokamak . . ."

Clarke received his B.S. degree in 1961 from Fordham University in New York City, and an M.S. degree in plasma physics from Massachusetts Institute of Technology in 1964. He joined the ORNL staff in 1966, after receiving his doctorate in nuclear engineering from MIT. Since January, 1974, Clarke has been director of the Fusion Energy (formerly Thermonuclear) Division.

A native of Long Island, N.Y., he is a Fellow of the American Association for the Advancement of Science, and a member of the American Physical Society. Clarke and his wife, Martha Ketelle, also an ORNL staff member, live at 24 Brookside Drive, Oak Ridge.

Y-12ers to new assignments

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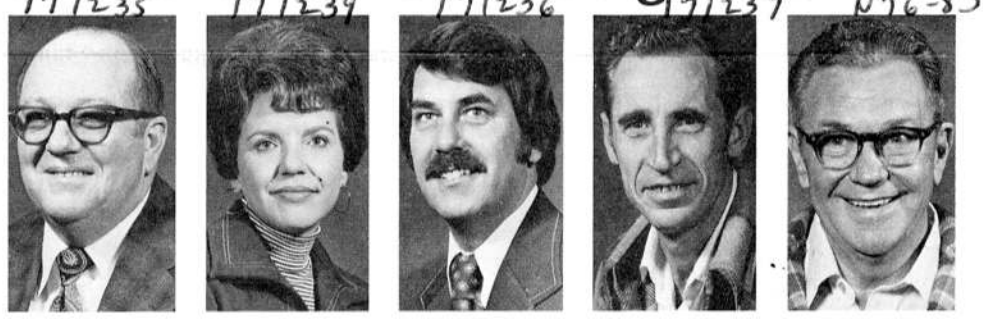


Allison Parker Rice Scott Wilder

Five recent promotions have been announced at the Y-12 Plant. David R. Allison has been named a production coordinator in Product Engineering and Scheduling; Lucy P. Parker has been named a supervisor in Metal Preparation; George T. Rice, Timmons Scott and Elmer W. Wilder have been promoted to supervisors in the Metal Preparation Division.

Allison, a native of Grenada County, Miss., has been with Union Carbide 25 years, working in ORGDP, as well as Y-12. He took part in the U.S. Army Air Corps Aviation Cadet Training and has done extension work at the University of Tennessee. Before joining Union Carbide, he worked with the Mississippi Power and Light Company, and the Michigan-Wisconsin Pipeline Company. He piloted a B-25 during World War II.

He and his wife, Winnie, who works in Y-12's Dispatching Department, live at 107 Sheridan Circle, Oak Ridge. They have two children, Darr and Danny.

Parker, a native of Elizabethton, grew up in Oak Ridge. She is the daughter of A.A. Pierce, a Y-12 retiree from the Fire and Guard Department. She first came to Y-12 18 years ago.

She lives at 112 Pallas Road, Oak Ridge, with her two sons, Tracy and Mitchel.

Rice, a native of Oak Ridge, was employed at Faulkner Buick Company before joining Union Carbide eight years ago.

Mrs. Rice is the former Judy Tipton and the couple live at 119 West Bryn Mawr Circle, Oak Ridge. They have a son, Tommy.

Scott, a native of Slaughters, Ky., served in the U.S. Navy before joining Union Carbide in 1960. He also worked with the Ford Motor Company in the early 1950's.

He and his wife, the former Shirley Wilhoit, live at Route 22, Heatherbrook Drive, Knoxville. They have two children, Donna and Johnny.

Wilder, a native of Hancock County, has been with Union Carbide 25 years. He was self-employed and served in the U.S. Army before that time.

He is married to the former Stella Lively, and they live at Route 1, Lenoir City. They have two children, Carolyn and James.

Cold weather energy-saver

Keep draperies and shades open in sunny windows; close them at night.

For autocross driver Williams . . .

In kitchen or race car, she's at home!

By Ramona Morris

Picture one young mother of three who loves cooking, sewing, and other domestic chores; place her in a small, bright orange, foreign race car, and what is the result? Disaster? Not if that young mother is Ellen Williams, publications coordinator with the technical publications section of ORNL's Information Division.

Williams, wife, mother and certified professional secretary (who not only makes her own clothes, but also the patterns for making them) drives an orange Porsche in obstacle races during her spare time.

Obstacle races (officially called autocross) include tasks testing the driver on car handling, such as turns and dodges at high speeds.

"The fastest I ever got in an obstacle race was around 100 miles per hour," Williams said. "It was on a short obstacle course. I was going down an airplane runway and had to make a 180-degree turn and come back."

Debut in North Carolina

Williams and her husband have been racing their orange Porsche for about a year and a half. It all started when some of their friends asked them to the races: Williams saw women driving and decided she wanted to try, too.

Her first race was in October, 1975, just four months after buying the Porsche. Beech Mountain, N.C., was the site for her debut.

"It was a short obstacle course, about a half mile," Williams said. "I had to weave in and out of pylons (the cones construction workers use to mark off sections of highways). It was just an elaborate course. I can't believe I came in third," she added.

It seems as though winning races just comes naturally for Williams. In a total of about 10 races she has won six first-place trophies, and two for Champion of the Year.

"I've always had an interest in driving and what I guess you'd call a 'natural ability to drive,'" she reflected. "I've always had a motorcycle, it seems, and they've given me a 'feel for the road.'"

'Such a scowl!'

On the day of a race Williams gets up early and goes to the course. After waiting for the fog to lift, she walks around the course to familiarize herself with the obstacles. Then it's time for the race.

Cars are lined up in their respective classes, which include separate divisions for men and women. Williams sits nervously while waiting her turn to run the course. She watches the other drivers intensely, looking for mistakes they may make so that she might avoid them.

"My husband takes photographs for a hobby and has taken pictures during races," Williams said. "You should have seen the first picture I saw of myself waiting for my turn. I knew I always get nervous before a race, but I didn't know I looked it! There was such a tense look on my face—you know, my brow was wrinkled together and such a scowl—you should see that picture!" she said.

Each driver is given three runs, and his/her best time of the three is recorded. After her class' turn is over, Williams hands the Porsche keys to her husband. Then, relaxing a little, she either watches the other races, takes pictures or helps keep score.

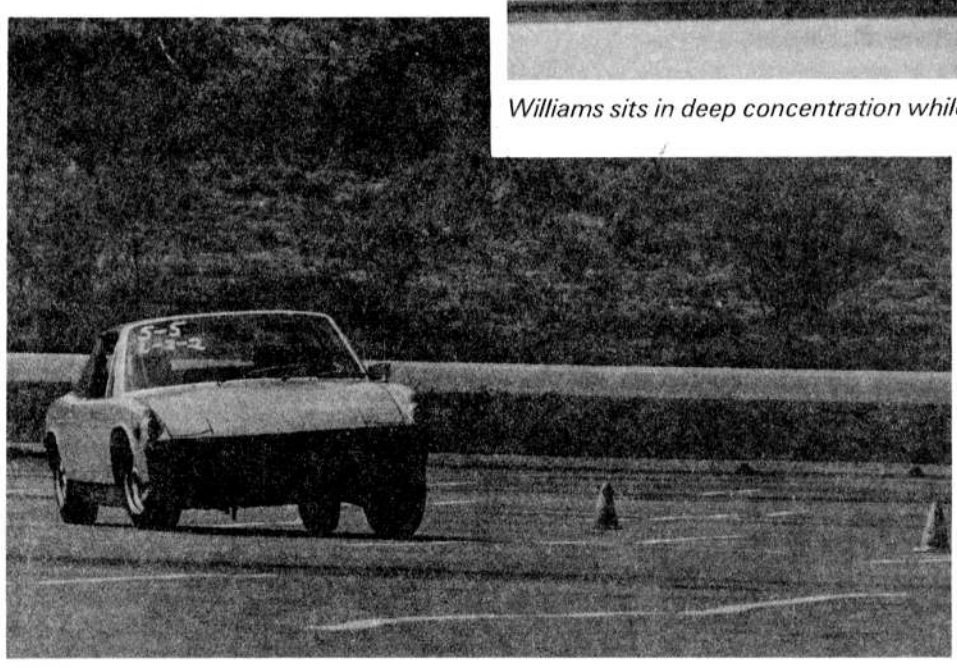
At the end of the races, all the first-place winners in the different divisions run against each other.

When not on the race course, Williams likes to run the sports car on winding mountain roads, especially the road that goes to Fontana Dam in North Carolina.

All races which Williams and her husband have driven in are sponsored by area sports clubs. They are members of the Porsche Club of America, Smoky Mountain Region. When they bought their orange roadster, one week before their wedding, the dealer told them about the club, Williams said.

"We drove the car on our honeymoon, came back, joined the club and have been racing ever since!"

Williams sits in deep concentration while waiting for her turn to drive.



Weaving around pylons is one obstacle in autocross racing.

Art show-auction . . .

The Oak Ridge Chapter of Hadassah is sponsoring a benefit exhibit and auction of fine art Sunday, February 20, at the Alexander Motor Inn, Oak Ridge. Original oils, batiks, etchings and lithographs will be shown and auctioned. Exhibits begin at 2 p.m., with the sale at 3. Wine and cheeses will be served, and there is no admission charge. Additional information may be obtained from Mrs. Max Kimmelman, Oak Ridge telephone 483-7972.

Ellen Williams working at ORNL's technical publications department.

anniversaries

Y-12 PLANT

30 Years

John G. Tate, 9215 Rolling Mill.

25 YEARS

Alexander Berry, Charles O. Henderson, Howard L. Wagner, Samuel Kite, Lawrence R. Phillips, Dorothy K. Pruden, Raymond M. Lawson and Chester E. Crowe.

ORGDP

30 YEARS

Martha R. Mourfield, Computer Sciences Division; Kenneth H. Cox, Chemical and General Field Maintenance; Barbara B. Doughty and Richard J. Magyar, Engineering Division.

25 YEARS

Clayton E. Mathis, William A. Moles, Warren F. Brown, Richard W. Hayes, Francis J. Moran, Maxine F. Thompson, Frank Marlin, Charles D. Maples, Benjamin L. Fike, Ralph E. Patterson and Ernest F. Brown.

20 YEARS

Beulah P. Barbee, Glenn C. Nelson and Joseph J. Vogt.

PGDP

25 YEARS

Paul L. Burks, Billy T. Wolfe, Richard A. Hinkle and Robert W. Parks.

20 YEARS

Charles J. Perkins.

ORNL

30 YEARS

Edward Brewster, Operations Division; Joe L. Neal Sr., Plant and Equipment Division; Sherman K. Swann, Finance and Materials Division; H. Brooks Graham Jr., Finance and Materials Division; James H. Bridges, Laboratory Protection Division; Robert E. Jones, Analytical Chemistry Division; Roland K. Abele, Instrumentation and Controls Division; Roy L. Towns, Chemical Technology Division; and Clyde R. Sellers, Laboratory Protection Division.

25 YEARS

John H. Pemberton, John H. Moore, John W. Dye, Gary M. Henderson, Stanley R. Ashton and Ethel L. Cagle.

20 YEARS

Charles E. Normand and Donna R. Watkins.

question box

If you have questions on company policy, write the Editor, Nuclear Division News *(or telephone your question in, either to the editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.*

Level 3 secretaries

Question: Recently a Level 3 secretary at ORNL was transferred from one Division to another. She was replaced by a secretary hired from outside. Why wasn't that job filled from within the Laboratory? I'm sure there are plenty of people at ORNL who can qualify for a Level 3. Also, a few months ago, a second employee was transferred from one division to another. Why wasn't that job filled through the Job Bidding System? Both of these jobs were in the Employee Relations Division at ORNL.

Answer: Level 3 secretarial jobs are not subject to the Job Opportunity System. Only Level 3 jobs that are entry jobs into a family series (e.g., Laboratory Aide) are posted. Jobs that are not subject to listing may be filled from within or without, and anyone who expresses a desire for a job that is not listed will be given consideration provided they have their present supervisor's permission. The expressed interest must come from the employee, as supervisors should not proselyte other supervisors' employees.

Traffic at Solway

Question: In view of the traffic jams at Solway Bridge, particularly in bad weather, has the Nuclear Division considered having different working schedules at the different Oak Ridge installations?

Answer: Help is on the way!

According to the State Road Commission's District Office, the new Solway Bridge and the presently authorized access roads will be completed by May. However, four-laning of Highway 62 east of the bridge and west of the bridge will not be finished until later.

Each installation attempts to have working schedules staggered to the extent required to minimize its own traffic problems. We do not think any Division-wide coordination is indicated at this time.

Survivor's check list

Question: I have seen a "Spouse Check List," showing things that should be done by a surviving spouse, listing Company benefits, etc. Has Union Carbide ever considered this to assist a survivor in getting through the mountains of paperwork required at such a time?

Answer: The Company has such a booklet entitled "To the Next of Kin." It is designed for the employee's use in inventorying various assets and income sources, including Company benefits, so that the person who is entrusted with the handling of an estate will be better able to complete the job. Copies are used in Retirement Counseling sessions and indoctrination of new employees at most installations.

If you would like a copy of this booklet, ask your Benefit Plans office to send you one.

Caffeine-free drinks?

Question: Is there some way you can get the canteen service to put drinks in the vending machines that are caffeine-free? Many people are allergic to caffeine.

Answer: There is not enough demand for caffeine-free coffee to justify putting it in the vending machines. There are three caffeine-free carbonated drinks plus two fruit drinks currently being vended through drink machines at various locations throughout the Nuclear Division. If none of these items is available in the machines near your work area, please contact the cafeteria manager at your installation. He/she will coordinate a product change with the vendor.

REFRIGERATOR TOO COLD?

To save on electric bills, turn your refrigerator to the warmest setting that will keep food from spoiling. Forty degrees is fine for the refrigerator, ten degrees for the freezer.

Don Roe named to post in OWI

The appointment of Donald B. Roe as contracts manager for the Office of Waste Isolation has been announced by Clayton D. Zerby, OWI Director. In his new position, Roe will be responsible for managing and coordinating OWI activities leading to the negotiation and awarding of contracts. In addition, he will be responsible for directing OWI's recruiting program.

Roe

Roe has been with the Nuclear Division since 1973. He received his bachelor's degree from Oakland University, Rochester, Mich., and his doctor of jurisprudence from the University of Tennessee. He also received an M.B.A. from UT.

Prior to joining the Nuclear Division he held a number of positions, including assistant Oak Ridge city attorney. In 1970, he was appointed counsel to the Select Committee on Small Business of the U.S. House of Representatives.

Since joining the Nuclear Division, he has worked in several areas, the most recent as acting manager of technical recruiting with the Central Employment Office.

Roe and his wife, the former Jo Hawkins, live at 1057 West Outer Drive, Oak Ridge, with their two daughters, Amy and Tracy.

Social security base up again January 1, to $16,500

When the Social Security program was started in 1937, the maximum payment made by an employee was $30 per year. The same amount was paid by the employer.

In 1977 the maximum payment by the employee, and also by the employer, will be more than 32 times as much as in the beginning -- $965.25.

The Social Security Administration announced several months ago that the wage base, from which taxes are withheld, would be increased from $15,300 to $16,500 effective January 1, 1977. The maximum tax to be paid by the employee and by the employer will be $965.25 in 1977 vs. $895.05 in 1976. For details concerning the increases and the years in which they occurred, see the table accompanying is article.

Today, more than 31,000,000 people are monthly recipients of benefits from Social Security including retirees and their spouses, disabled workers and their families, and dependents of deceased workers. In 1935, when Social Security first began, only retired workers could receive benefits. Through the years, the law has been amended many times. In 1939, survivor's benefits were provided; in 1954, disability insurance was added to give workers protection against loss of earnings due to disability; and in 1972, the provisions for an automatic cost of living increase was added. (In 1976, beneficiaries received an increase of 6.5% due to this 1972 change). A 1975 amendment established an automatic increase in the "Tax Base" coincident with any rise in the Consumer Price Index.

The adjoining table illustrates a brief chronological history of the development of the "Tax Base" from 1937 to the present.

History of Social Security Taxes

Year	Tax Rates: Pension Rate	Tax Rates: Hospital Insurance Rate	Tax Rates: Combined Rate	Tax Base	Maximum Annual Tax Employer-Employee Each
1937-49	1.0%			$ 3,000	$ 30.00
1950	1.5			3,000	45.00
1951-53	1.5			3,600	54.00
1954	2.0			3,600	72.00
1955-56	2.0			4,200	84.00
1957-58	2.25			4,200	94.00
1959	2.5			4,800	120.00
1960-61	3.0			4,800	144.00
1962	3.125			4,800	150.00
1963-65	3.625			4,800	174.00
1966	3.85	.35%	4.2%	6,600	277.20
1967	3.9	.5	4.4	6,600	290.40
1968	3.8	.6	4.4	7,800	343.20
1969-70	4.2	.6	4.8	7,800	374.40
1971	4.6	.6	5.2	7,800	405.60
1972	4.6	.6	5.2	9,000	468.00
1973	4.85	1.0	5.85	10,800	631.80
1974	4.95	.9	5.85	13,200	772.20
1975	4.95	.9	5.85	14,100	824.85
1976	4.95	.9	5.85	15,300	895.05
1977	4.95	.9	5.85	16,500	965.25
1978-80	4.95	1.1	6.05		
1981-85	4.95	1.35	6.30		
1986-2010	4.95	1.5	6.45		
2011 and after	5.95	1.5	7.45		

NOTE: Since January 31, 1975, the tax base rises automatically to keep in step with the Consumer Price Index.

Firewood cuttings this weekend

Public firewood cuttings will be held on the Oak Ridge reservation this Friday and Saturday, January 21 and 22.

Cutting will be in designated areas, and by permit which will be good only for the day issued. There will be a $5 permit fee for each individual or family to provide personnel needed to monitor the activity.

According to Dennis Bradburn, supervisor of the forest management program, most of the cutting will involve low-grade hardwood trees, although some treetops and limbs from logging operations will also be available.

Persons interested in participating should meet Friday or Saturday at the intersection of the Oak Ridge Turnpike and Highway 58, between 8 and 9:30 a.m. Participants must also bring their own cutting equipment. Members of the forest management staff will accompany groups to the cutting areas. After firewood has been cut, road access will be provided for private vehicles to remove it from the reservation.

Cutting activities will end promptly at 4 p.m. each day. Due to safety regulations, children under 12 will not be allowed in the cutting areas.

For additional information, call Bradburn at 3-1266.

recreationotes

ORNL bowling . . .

The Recycles took command of the ORNL A League, as they ousted the ORAU team from its long-standing hold on first place.

The Mousechasers keep a two-point edge in the ORNL Ladies League, as Mary Long rolls a 520 scratch, 622 handicap series. Her 216 scratch game was high for the night also.

The Damagers are out of reach in the C League, miles ahead of the Alley Rads.

ORGDP bowling . . .

The All Steers pulled into first place in the Tuesday League, ousting the City Slickers . . . their high game of 1142, and high series of 3108 did the trick.

The Amps hold a small lead over the Planners and Mix-Ups as the Wednesday League tightens up. Jim Fletcher rolled a 246 game, 671 series early in January.

The Women's League lead was assumed by the Gutter Snipes. Vickie Houston's 661 series highlighted rolling in the last week of the year.

Carbide bowling . . .

The Oops team took the first half of the Carbide Family Mixed League. Winnie Woody sparked the women of the league recently with a 548 series.

Y-12 fishing rodeo . . .

Y-12ers and members of their family have stepped to the front with prize-winning catches in the waters of East Tennessee. Their prizes may be picked up at the Recreation Office, Building 9711-5.

Winners were:

Largemouth bass	
Gary T. Bowers	7 lbs. 1 oz.
H. N. Benninghoff	6 lbs. 14 ozs.
William A. Kramer	4 lbs. 14 ozs.
Smallmouth bass	
Arthur M. Brown Jr.	6 lbs. 2 ozs.
Max D. Galyon	4 lbs. 8 ozs.
H.L. Pace	3 lbs. 4 ozs
Striped bass	
J. W. Graves (wife Margie)	2 lbs. 14 ozs.
J. N. Treadwell (son Justin)	1 lb.
Bream	
Candy Teague	11 ozs.
David Teague	10 ozs.
G. H. Caylor (wife Golda)	7.5 ozs.
Crappie	
J. W. Graves	1 lb. 15 ozs.
J. N. Treadwell	1 lb. 5 oz.
G. H. Caylor	1 lb. 2 ozs.
Rockfish/Hybrid	
B. O. Miller	20 lbs.
Rough fish	
R. E. Belcher	18 lbs. 1 oz.
W. K. Mink	9 lbs. 8 ozs.
Sauger	
D. J. Eiler	5 lbs. 8 ozs.
R. S. Phillippi	4 lbs. 4 ozs.
Ray C. Kelley	3 lbs. 4 ozs.
Trout	
J. F. Gilliam	5 lbs. 15 ozs.
J. W. Graves (son Charles)	3 lbs. 15 ozs.
G. R. Owen	2 lbs. 6 ozs.
Walleye	
H. M. Monday (wife Margaret)	5 lbs. 8 ozs.
Joe Whittaker	4 lbs. 1 oz.
J. L. Parrett	3 lbs. 12 ozs.

ORGDP fishing rodeo . . .

Winners in the ORGDP fishing rodeo for the last half of 1976 are named. Their awards may be picked up at Room C-136, Building K-1001.

Winners were:

Largemouth bass	
W. E. Thomas	8 lbs. 10 ozs.
D. C. Howard	4 lbs. 14 ozs.
C. D. Butler	4 lbs. 12 ozs.
Smallmouth bass	
Bruce Buhal	6 lbs. 7 ozs.
M. J. E. Shelton	4 lbs. 12 ozs.
Bob Hyde	3 lbs. 14 ozs.
Striped bass	
H. E. Walters	3 lbs. 2 ozs.
Bream	
Huey Sides	10 ozs.
C. W. Castle	6 ozs.
Crappie	
Gary Walter (Son of H. E.)	1 lb. 15 ozs.
Hybrid/Rock	
Jacquita D. Wilson	32 lbs. 2 ozs.
P. D. Brooks	22 lbs. 12 ozs.
J. D. McClendon	16 lbs.
Rough fish	
Joe Fletcher	6 lbs. 15 ozs.
Sauger	
James M. Stansberry	3 lbs. 11 ozs.
William M. Cox	2 lbs.
Dwight Morrow	1 lb. 5 ozs.
Walleye	
W. H. Caylor (Son of W. C.)	3 lbs. 3 ozs.
Mrs. H. E. Walters	3 lbs. 2 ozs.
R. D. Shaffer	2 lbs. 8 ozs.

Volleyball leagues . . .

The Blue Team still dominates the Nuclear League in Volleyball League standings as the Over-The-Hill Gang and the Skins tied in second place. The Taxi Squad is first in the Atomic League, and the Gauss House Gang hold a three-pointer in the Carbon League.

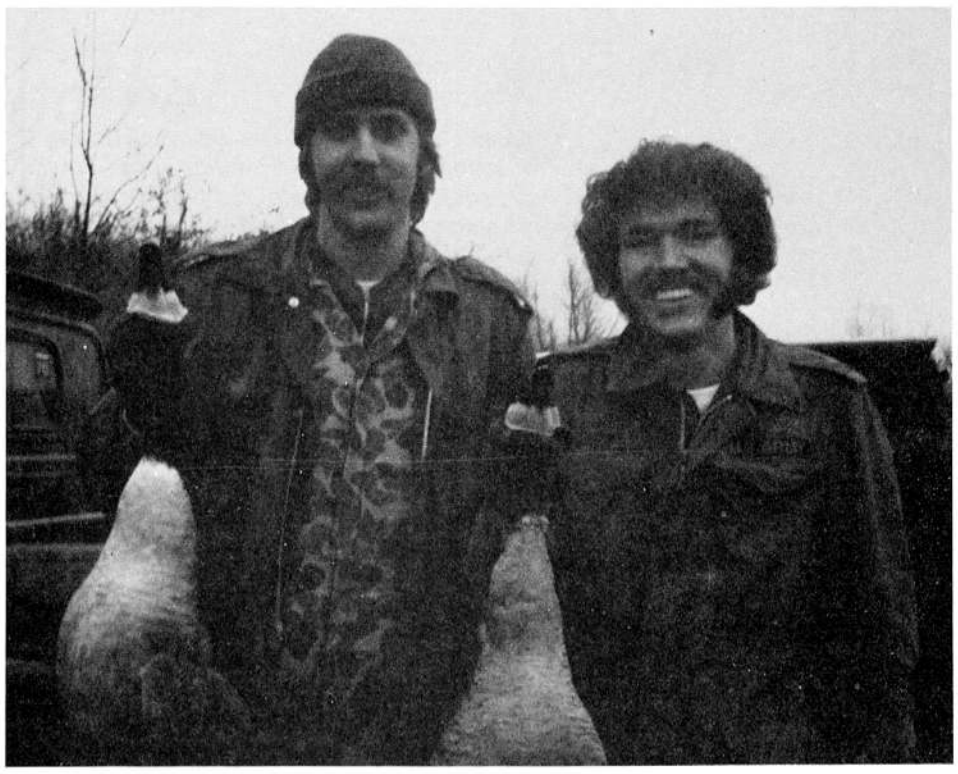
Team	Won	Lost
NUCLEAR LEAGUE		
Blue Team	26	7
Over-The-Hill Gang	22	8
The Skinks	22	8
Pogo's	21	9
Radd-Fizz	23	10
Artie's Army	19	11
Maxwell Demons	14	16
Ball Busters	15	18
C-Shift Reds	8	22
Fed's	5	25
The Abends	7	26
The Kilos	4	23
ATOMIC LEAGUE		
Taxi Squad	23	4
Diggers No. 1	21	9
Diggers No. 2	20	10
Quarks	13	14
Old Men	5	25
Ecomen	5	25
CARBON LEAGUE		
Gauss House Gang	20	4
Volares	17	7
Group	12	12
Half A Chance	8	16
Killer Bees	3	21

Skeet league . . .

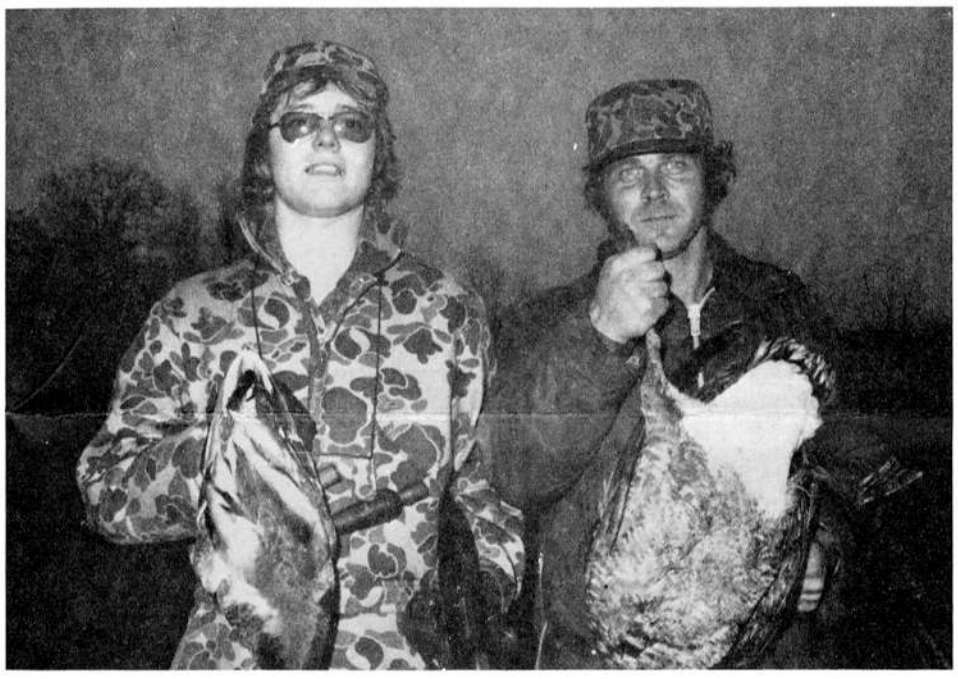
George Kwiecien, ORNL, took first place in December skeet firing with a 48.556 handicap tally. Y-12ers Bob Allstun and Bert Searles placed second and third with 48.384 and 48.232 respectively. Vern Raaen, Ronnie Crawford and Alan Van Hull all fired well, too, but were under penalty because of previous winnings.

Cold weather energy-saver

Clean or replace the filter in forced-air heating systems every month.



TROPHY WINNERS—Ralph Story and Gene R. Brown, left to right, show off the mallards they bagged in a recent hunt at Paducah.



CAMOUFLAGED HUNTERS—Robbin Hines and Roy Purcell, left to right, are shown in the fancy hunting habits after bagging a mallard and a Canadian wild goose in a recent wildfowl hunt.

wanted

Y-12

CAR POOL members from vicinity of Fox Fire, Lakeshire, Pine Springs sub-divisions, West Knoxville, to any portal, straight day. Win Jordan, plant phone 3-7767, home phone Knoxville 588-9312.

RIDE or will join car pool from Vista Drive, Clinton, to Central Portal, straight day. J. G. Moore, plant phone 3-5841, home phone Clinton 457-0493.

COMMUTER pool van riders wanted from Cumberland Estates area, Knoxville, to any portal, straight day. Steve Shipley, plant phone 3-7776, home phone, Knoxville 588-8660.

RIDE from Londontown apartments, Weisgarber Road, Paper Mill exit, to West Portal, straight day. Teresa Shipley, plant phone 3-5077, home phone Knoxville 588-7153.

RIDE from East Powell area to North Portal, straight day. Sam Campbell, plant phone 3-5636, home phone Powell 947-7829.

Wildfowl hunting programs

The wildfowl hunting program for employees at Paducah is in full swing, with every hunting date filled. There is one more hunt scheduled and more information on this popular event will follow in a later issue of **Nuclear Division News.**

ORGDP

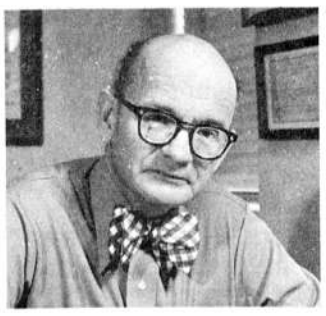
JOIN CAR POOL from Emerson Circle or East Village area, Oak Ridge, to Portal 5, A shift. Bill Bullens, plant phone 3-3456, home phone Oak Ridge 483-7233.

RIDE or will join car pool from West Knoxville (Landook/Lovell Heights area) to K-1007, 7:45-4:15 shift. Ron Barry, plant phone 3-9671, home phone Knoxville 966-1926.

JOIN CAR POOL from Village Green, Concord, to Portal 3, straight day. N. E. Buttner, plant phone 3-3724, home phone Concord 966-6449.

ORNL

RIDERS or JOIN CAR POOL from Walker Springs Road area, Knoxville, to North or East Portal, 8-4:30. Troy Estes, plant phone 3-6853; home phone 690-3003.



GBS and the flu vaccine

by T. A. Lincoln, M.D.

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 20, Y-12, or call the news editor in your plant, and give him or her your question on the telephone.)

During the past couple of weeks, TV newscasters have choked over trying to pronounce the Guillain-Barré Syndrome. Several "science" writers have also delighted in "throwing stones" at the swine flu vaccine program because of this exceedingly rare neurological complication. The purpose of this article is to help you pronounce the name, tell you what it is and then try to put this complication in better perspective.

This syndrome was first described by three French physicians, G. Guillain (gee-yahn with a hard "g"), J. A. Barré (bah-ray') and A. Strohl, who treated several soldiers during World War I. It was their careful description of the unusual spinal fluid changes which gave them special recognition. The basic condition had been described by another French physician, O. Landry, in 1859.

Some writers still refer to this neurologic disorder as the Landry-Guillain-Barré-Strohl syndrome. Just how the first and last men got left out when it came to assigning names for textbooks is not clear. (It is a fate which many other worthy physicians have experienced!) Regardless, the condition is now almost universally known as the Guillain-Barré Syndrome (GBS).

Early symptoms variable

This disorder is a relatively rare acute polyneuropathy which causes a rapidly developing paralysis. In many ways it acts like poliomyelitis, and can easily be confused with it. Typically it comes on two to three weeks following an upper respiratory infection, though it has been seen following hepatitis, measles, mumps, shingles and infectious mononucleosis.

A possible association with previous immunization procedures has been known since 1924; a typical case of GBS which developed one month after a smallpox vaccination was reported in 1941. In 1966, one case was reported to have followed an influenza immunization.

The onset of symptoms is highly variable. Although many note peculiar sensory disturbances such as leg pain, numbness and partial loss of sensation in both arms or legs, it is muscle weakness which is the most alarming. It typically involves both lower arms or legs first and then moves to the muscles in the upper arms or legs. Sometimes, however, severe involvement also occurs in the trunk, and the patient is unable to sit up or lift the arms or legs off the bed.

Occasionally the progression of symptoms is slow, but typically the height of the paralysis develops in three to seven days. The cranial nerves are often involved, with difficulty talking, swallowing and chewing being common. Facial muscles may become paralyzed as after a stroke, but in GBS both sides are often involved.

Rarely, breathing muscles become paralyzed and the patient has to be put into a tank respirator (iron lung). There may be loss of control of anal and bladder sphincter muscles with incontinence. Bizarre mental disturbances may occur, but some of these are probably related to anxiety over the rapid uncontrollable progression of the symptoms.

Spinal fluid changes

The spinal fluid usually has characteristic changes which help in making the diagnosis. There is an increase in protein without an increase in cells. Unfortunately, the typical spinal fluid changes may not occur for a week or two.

Most patients eventually recover, although five to ten percent may die due to total paralysis of breathing muscles. Complete recovery occurs in about two-thirds of the cases, with the prognosis better in adults than in children. Many are left with residual weakness in the arms or legs which sometimes requires braces for support.

GBS seems to strike men slightly more frequently than women, and all ages may be affected. In a Mayo Clinic study which covered Olmstead County, Minn., from 1935 to 1968, GBS occurred most frequently at ages 40 to 59. Their cases were not clustered in any season or any year. In another analysis done at the University of Michigan, more cases were found in the fall, winter and spring than in the summer.

Although there is nothing to suggest an acute infection such as a fever, repeated efforts to identify a consistent infectious agent have been unsuccessful. The Epstein-Barr virus, the one which causes infectious mononucleosis, was found in 7 of 24 cases studied two years ago, even though only one had clinical mononucleosis.

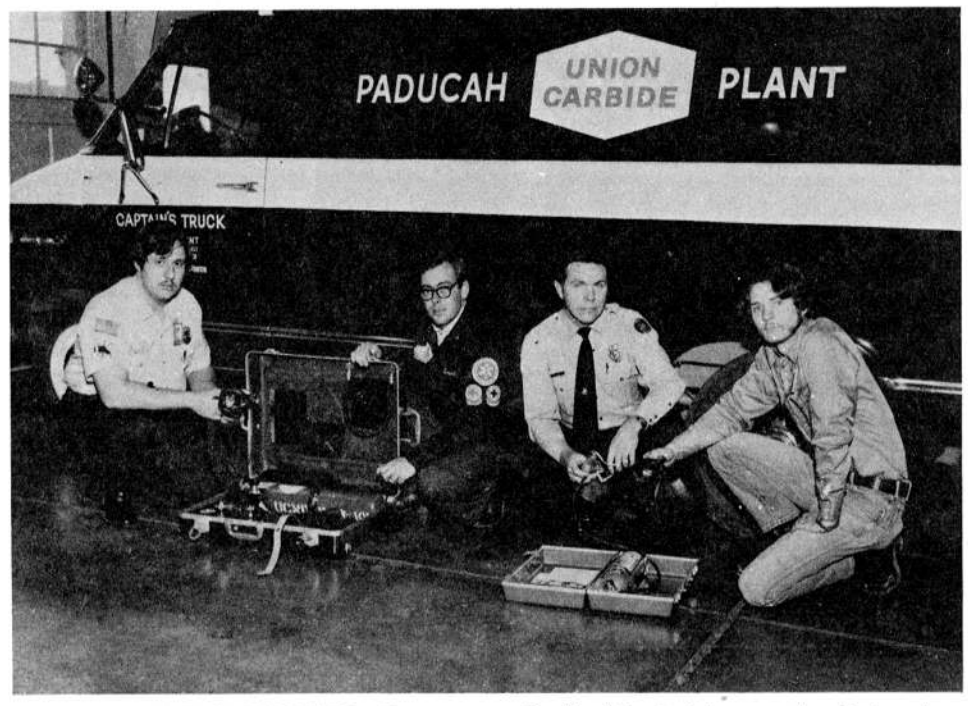
No known treatment

The most prevalent view among experts is that GBS is some type of delayed hypersensitivity reaction against myelin, the fat-like substance which forms a sheath around peripheral nerves. One would normally expect cortisone treatment to have a favorable effect if it were some type of hypersensitivity reaction, but its effect has been equivocal in most cases. No treatment is known which reliably affects the course of the syndrome. Physiotherapy plays an important role in rehabilitation, but during the acute phase the principal effort is in keeping the patient alive until recovery begins.

The incidence rate is thought to be between one and two per 100,000 population per year. In the period October 1 to December 22, 1976, 172 cases of GBS were reported in the U.S. Ninety-nine had received the swine flu vaccine, 67 had not, and in 6 it could not be determined. In Tennessee, 22 cases occurred, but only 8 had received the vaccine.

The age-specific attack rate was significantly higher in those who had been vaccinated than in those who had not, so the swine influenza vaccine program was stopped. No such meticulous monitoring for reactions has ever been conducted for other diseases or immunizations which have been associated with GBS.

It should not surprise most readers to realize that there is "no free lunch." Almost any treatment or prevention program in medicine is associated with some risk. Bizarre allergic reactions have always been recognized as a rare but dangerous risk to almost any medicine. Like everything else we do, we balance risk verus benefit. Those who smoke have accepted a risk hundreds, maybe thousands, of times greater than that associated with the flu vaccine.



CERTIFIED TECHNICIANS—Emergency Medical Technicians at the Paducah Plant include, from left, Donald Elrod, Richard Shepherd, Joe Howard and Dennis Warford. These men serve on a voluntary basis from the West McCracken County Fire District, aiding in times of emergency in the community.

Vital community service rendered by emergency medical technicians

The Emergency Medical Technician (E.M.T.) performs a valuable, voluntary service in the community in which he/she lives. Special skills are required by these people to apply emergency treatment at the scene of an accident or illness, often saving lives or easing pain in the process.

Four employees from the Paducah Gaseous Diffusion Plant are rendering voluntary service in the West McCracken County Fire District.

Joe Howard, Plant Protection; Donald Elrod, Fabrication and Maintenance; Dennis Warford, Plant Protection; and Richard Shepherd, Cascade Operations, all have qualified as an E.M.T.

The qualifications for an emergency medical technician are very extensive. Technicians must complete an 81-hour course in the "Emergency Care and Transportation of the Sick and Injured" and "E.M.T.—Student Work and Certification by the Department for Human Resources." Such skills as bandaging and dressing, splinting for all kinds of fractures (including the extremities and spine), three techniques of artificial resuscitation, Cardiopulmonary Resuscitation, and the reading of all basic life-support indicators are required.

In addition, training is taken in personal attitude, personal appearance and conduct under the stress encountered at an emergency. The E.M.T. candidate is graded on all these phases of training. Every two years the E.M.T. must renew his certification in a two-day, eight-hour session to bring his skills up-to-date in newer techniques and developments.

Three of the Paducah E.M.T.'s are also Red Cross first aid instructors. Howard and Elrod are standard and advanced first aid, as well as C.P.R. instructors; and Waterford is a standard and advanced instructor, as well as a C.P.R. instructor.

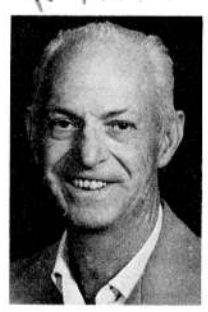
next issue . . .

The next issue will be dated February 3. The deadline is January 26.

retirements

Alva G. Burris
Central Employment
33 years service

Lee Davidson
ORGDP
Technical Services
32 years service



Vernon Gamble
Y-12 Alpha 5 East
23 years service

James B. Sims
PGDP Guard Department
25 years service

Thomas A. McKenzie
PGDP
Employee Relations
33 years service

Nelson Weasner
ORGDP Operations
32 years service

Jack Bowles
Plant & Equipment,
ORNL
18 years service

David L. Holcomb
ORNL Plant & Equipment
30 years service

Kurt Kraus
Chemistry, ORNL
31 years service

Also:

Richard J. Emmert
ORGDP Engineering
23 years service

Earl H. Birt
ORGDP Fabrication and
Maintenance
11 years service

George W. Wylie
ORGDP Computer Sciences
26 years service

division deaths

William H. Cook, a development staff member in ORNL's Metals and Ceramics Division, died January 1 at Fort Sanders Hospital, Knoxville. He had been with the Nuclear Division since 1954.

Mr. Cook

Mr. Cook is survived by his wife, Mildred Cook, 5908 Nottingham Rd., Knoxville; a son, Robert W. Cook; a stepson, Paul H. Coleman; his parents, Mr. and Mrs. William Cook; and a sister, Mrs. R. R. Springer.

Graveside services were held January 3 at Greenwood Cemetery.

James E. Nelson, Finance and Budget Department at the Paducah Gaseous Diffusion Plant, died recently at Lourdes Hospital.

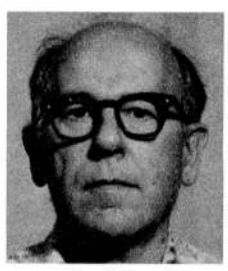
Mr. Nelson

Survivors include his wife, Mary, a stores supervisor in the Paducah Plant; a son, Gary Danback, and his mother, Mrs. Daisy Nelson.

Funeral services were held at the St. Paul Lutheran Church, with burial in the Mt. Kenton Cemetery.

The family has requested that memorials be in the form of contributions to the St. Paul Lutheran Library Fund, St. Paul Lutheran Church, 21st and Kentucky Avenue, Paducah.

Robert Paul Ward Sr., a health physicist in ORNL's Health Physics Division, died January 6 in Oak Ridge Hospital. Mr. Ward had been at ORNL since December 1946.



Mr. Ward

He is survived by his wife, Julia Barlowe Ward, 223 Outer Drive, Oak Ridge; four sons, Robert Jr., Philip, Thomas and Gregory Ward; a daughter, Jann Ward; a brother, Edward R. Ward; two sisters, Gladys Ward Dunn and Mary Carmen Earle; and a granddaughter.

Funeral services were held January 8 at St. Mary's Catholic Church, Oak Ridge, followed by burial in Oak Ridge Memorial Park.

DRIPS WASTE DOLLARS

Fix leaky faucets — they waste both hot and cold water and cost you money. Usually a drip can be stopped by replacing the washer.

Russell cited

(Continued from page 1)

(small flies) had been used by researchers to study the genetic effects of radiation. Russell's early findings that mammals are much more sensitive than Drosophila to radiation-induced mutations, formed the basis on which the National Academy of Sciences Committee, in its 1956 report, recommended a reduction in the permissable dose.

Dose-rate studies

Two years later, the Oak Ridge group reported another finding that radically changed human risk estimates—namely, a marked effect of dose-rate, which lowered the human risk. The dose-rate effect had direct and important practical implications with regard to estimations of human risk from radiation and the setting of standards and regulations for peaceful uses of atomic energy.

While the work on the genetic effects of radiation was in progress, Russell and his co-workers also made several contributions to basic genetics. Best known among these was the important discovery of the genetic mechanism for sex determination in the mouse; the male-determining characteristic of the Y chromosome. Other investigators later found the same situation to exist in humans.

Useful in other studies

The methods developed by Russell in mammalian radiation genetics are proving equally useful in mutagenesis studies with chemicals, including those related to energy production. His research in radiation genetics is still very active and, in recent years, has been combined with research in chemical mutagenesis.

Russell has received numerous other honors for his work, including election to the United States National Academy of Sciences in 1973. Also in that year, he shared the International Roentgen Medal with his wife, Liane, also a distinguished geneticist.

Other Honors

Last year, Russell received the Distinguished Achievement Award of the Health Physics Society for "invaluable contributions to the field of radiation protection through research in radiation genetics."

He has served on numerous scientific committees, including the National Academy of Sciences-National Research Council committees on Biological Effects of Atomic Radiation and Biological Effects of Ionizing Radiation.

Russell was a member of the U.S. delegation to the United Nations' Geneva Conferences on the Peaceful Uses of Atomic Energy in 1955, 1958 and 1971, and has been an advisor to the Federal Radiation Council. He was president of the Genetics Society of America in 1965.

The Russells, active in civic and cultural activities as well as conservation efforts in the area, live at 130 Tabor Road, Oak Ridge.

Lotts honored

(Continued from page 1)

evaluation of fuel cycle economics, and his analytical approaches to evaluating nuclear fuel cycle costs have become an extensively used tool in ERDA's nuclear systems analyses.

Lotts is a Fellow of the American Nuclear Society, and currently serves as chairman of its Oak Ridge Section. He also is a member of the American Society for Metals and Sigma Gamma Epsilon. He has authored or coauthored numerous publications and was co-recipient of a U.S. patent in 1967.

Started in 1959

The E. O. Lawrence awards were established in 1959 by the Atomic Energy Commission, ERDA's predecessor agency, in memory of the late E. O. Lawrence, inventor of the cyclotron and director of two laboratories which now bear his name at Berkeley and Livermore, Calif.

The awards are given to men and women who are not more than 45 years old, who are U.S. citizens, and who have made especially meritorious contributions to the development, use, or control of atomic energy in all relevant sciences, including medicine and engineering. Awards are made by the ERDA administrator, after consultation with ERDA's General Advisory Committee.

Other recipients of the 1976 E. O. Lawrence Award are A. Philip Bray, General Electric Company; James W. Cronin, University of Chicago; Kaye D. Lathrop, Los Alamos Scientific Laboratory; and Edwin D. McClanahan, Battelle Pacific Northwest Laboratories.

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